

6. The gas turbine engine as set forth in claim 1, wherein said fan has an outer diameter that is greater than an outer diameter of the low pressure turbine section.

7. The gas turbine engine as set forth in claim 1, wherein said gear reduction is greater than or equal to 2.4.

8. The gas turbine engine as set forth in claim 7, wherein said gear reduction is less than or equal to 4.2.

9. The gas turbine engine as set forth in claim 8, wherein said expansion ratio is greater than or equal to 5.0.

10. The gas turbine engine as set forth in claim 9, wherein said bypass ratio is greater than or equal to 8.

11. A method of operating a gas turbine engine including the steps of:

driving a fan to deliver a first portion of air into a bypass duct, and a second portion of air into a low pressure compressor, a bypass ratio of the first portion to the second portion being greater than or equal to 8.0;

the first portion of air being delivered into the low pressure compressor, into a high pressure compressor, and then into a combustion section, the air being mixed with fuel and ignited, and products of the combustion passing downstream over a high pressure turbine, and then a low pressure turbine, the low pressure turbine section being operated with an expansion ratio greater than or equal to 5.0; and

said low pressure turbine section being driven to rotate, and in turn rotating said low pressure compressor, and rotating said fan through a gear reduction, said gear reduction having a ratio of greater than or equal to 2.4.

12. The method as set forth in claim 11, wherein said gear reduction is greater than or equal to 2.4.

13. The method as set forth in claim 12, wherein said gear reduction is less than or equal to 4.2.

14. The method as set forth in claim 13, wherein said expansion ratio is greater than or equal to 5.0.

15. The method as set forth in claim 14, wherein said bypass ratio is greater than or equal to 8.

16. The method as set forth in claim 11, wherein said fan has an outer diameter that is greater than an outer diameter of the low pressure turbine section.

17. A gas turbine engine comprising:

a core section defined about an axis;

a fan section mounted at least partially around said core section to define a fan bypass flow path;

a multiple of fan exit guide vanes in communication with said fan bypass flow path, said multiple of fan exit guide vane rotatable about an axis of rotation to vary an effective fan nozzle exit area for said fan bypass flow path, said multiple of fan exit guide vanes are independently rotatable, said multiple of fan exit guide vanes are simultaneously rotatable, said multiple of fan exit guide vanes are mounted within an intermediate engine case structure, each of said multiple of fan exit guide vanes include a pivotable portion rotatable about said axis of rotation relative a fixed portion, said pivotable portion includes a leading edge flap; and

wherein a bypass ratio for the gas turbine engine which compared the air being delivered by the fan section into a bypass duct to the amount of air delivered into the core section is greater than 10, expansion ratio across a low pressure turbine section is greater than 5, and the low pressure turbine section driving the fan section through a gear reduction, with the gear reduction having a ratio greater than 2.5.

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